Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method, comprising:

receiving packet fragments at an entry point;

determining if a packet fragment received at the entry point is a head fragment or a non-head fragment;

if the received packet fragment is a~~a~~ said non-head fragment:

determining if a helper session associated with a~~a~~ said head fragment, corresponding to the received non-head fragment, is present~~;~~; updating the received non-head fragment with routing information from the helper session~~;~~ and forwarding the updated non-head fragment based on the routing information from an exit point; and

otherwise storing the received non-head fragment if the helper session is not present, and waiting for the corresponding head fragment to be received at the entry point; and

if the received packet fragment is the head fragment:

processing the head fragment to determine said routing information, including a destination address for said head fragment; and

~~at the exit point,~~ updating any stored corresponding non-head fragment with said routing information ~~obtained~~ determined as a result of processing the head fragment, and forwarding the updated corresponding non-head fragment from the exit point,

wherein said updating the received non-head fragment with routing information and said updating any stored corresponding non-head fragment with said routing information include:

applying said determined routing information that includes said destination address to said received non-head fragment and to said any stored corresponding non-head fragment.

2.   (Currently Amended) The method of claim 1 wherein processing the head fragment includes generating a session pointer data structure having the routing information, the method further comprising at the exit point after processing the head fragment:

locating the session pointer data structure that was generated during the processing of the head fragment; and

generating the helper session based on the routing information from the session pointer data structure; and

wherein said applying said determined routing information to said any stored corresponding non-head fragment includes using the routing information in the generated helper session to update any stored corresponding non-head fragment, the method further including:

applying the routing information in the generated helper session to or a corresponding non-head fragment subsequently received at the entry point after receiving said head fragment.

3.   (Original) The method of claim 1 wherein receiving packet fragments at the entry point comprises receiving IP-fragmented packets.

4.   (Original) The method of claim 1 wherein the head fragment includes substantially all header information from its original packet, and wherein the non-head fragment includes relatively less of the header information from the original packet.

5.   (Original) The method of claim 1 wherein both the head and non-head fragments contain duplicative header information from their original packet, the method further comprising:

processing one of the fragments having the header information as the head fragment; and

designating another one of the fragments having the header information as the non-head fragment.

6. (Original) The method of claim 1 wherein updating the non-head fragment with routing information from the helper session includes updating source and destination address fields of the non-head fragment.

7. (Original) The method of claim 1 wherein updating the non-head fragment with routing information from the helper session includes adding a routing tag to the non-head fragment.

8. (Original) The method of claim 1 wherein processing the head fragment includes processing the head fragment according to at least one of Layer 4 through Layer 7 criteria.

9. (Currently Amended) A method, comprising:

determining if a fragment is either a head fragment or a non-head fragment;

processing the fragment if it is a head fragment, including ~~generating~~ determining routing information that includes a destination address for said head fragment; and

applying the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment and to any corresponding stored non-head fragment that is received prior to the head fragment.

10. (Currently Amended) The method of claim 9, further comprising forwarding the non-head fragments having the determined routing information applied thereto, ~~without processing these non-head fragments similarly to the head fragment~~.

11.   (Currently Amended) The method of claim 9, further comprising:

generating a session associated with the head fragment;

obtaining the routing information from the session, and wherein said applying the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment includes applying the routing information obtained ~~therefrom~~ from said session to any corresponding non-head fragment received subsequently after the head fragment; and

storing ~~any~~ a plurality of corresponding non-head fragments if the session has not been generated, and wherein said applying the determined routing information that includes said destination address to any corresponding stored non-head fragment includes subsequently applying the determined routing information to ~~these~~ said stored plurality of non-head fragments after the session has been generated.

12.   (Original)   The method of claim 9 wherein applying the routing information to the non-head fragments includes updating source and destination fields of these fragments.

13.   (Currently Amended) An article of manufacture, comprising:

a ~~machine~~computer-readable medium having instructions stored thereon that are executable by a processor to handle fragments, by:

~~determine~~ determining if a fragment is either a head fragment or a non-head fragment;

processing the fragment if it is a head fragment, including instructions to ~~generate~~ determining routing information that includes a destination address for said head fragment; and

applying the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment and to any corresponding stored non-head fragment that is received prior to the head fragment.

14.   (Currently Amended) The article of manufacture of claim 13 wherein the ~~machine~~computer-readable medium further includes instructions stored thereon <u>that are executable by said processor</u> to handle fragments, by:

forward<u>ing</u> the non-head fragments having the routing information applied thereto, ~~without processing these non-head fragments similarly to the head fragment~~.

15.   (Currently Amended) The article of manufacture of claim 13 wherein the ~~machine~~computer-readable medium further includes instructions stored thereon<u> that are executable by said processor</u> to handle fragments, by:

~~generate~~ <u>generating</u> a session associated with the head fragment;

obtain<u>ing</u> the routing information from the session<u>, and wherein said applying the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment includes</u> applying the routing information obtained ~~therefrom~~ <u>from said session</u> to any corresponding non-head fragment received subsequently after the head fragment; and

~~store~~ <u>storing</u> ~~any~~ <u>a plurality of</u> corresponding non-head fragment<u>s</u> if the session has not been generated<u>, and wherein said applying the determined routing information that includes said destination address to any corresponding stored non-head fragment includes</u> subsequently apply<u>ing</u> the<u> determined</u> routing information to ~~these~~ <u>said</u> stored <u>plurality of</u> non-head fragments after the session has been generated.

16.   (Original) The article of manufacture of claim 13 wherein the instructions to apply the routing information include instructions to apply a routing tag to the non-head fragments.

17.   (Currently Amended) A system, comprising:

a means for determining if a fragment is either a head fragment or a non-head fragment;

a means for processing the fragment if it is a head fragment, including a means for ~~generating~~ determining routing information that includes a destination address for said head fragment; and

a means for applying the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment and to any corresponding stored non-head fragment that is received prior to the head fragment.

18.   (Currently Amended) The system of claim 17, further comprising a means for forwarding the non-head fragments having the determined routing information applied thereto~~, without processing these non-head fragments similarly to the head fragment~~.

19.   (Currently Amended) The system of claim 17, further comprising:

a means for generating a session associated with the head fragment;

a means for obtaining the routing information from the session, and wherein said means for applying the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment includes means for applying the routing information obtained ~~therefrom~~ from said session to any corresponding non-head fragment received subsequently after the head fragment; and

a means for storing ~~any~~ a plurality of corresponding non-head fragments if the session has not been generated, and wherein said means for applying the determined routing information that includes said destination address to any corresponding stored non-head fragment includes means for subsequently applying the determined routing information to ~~these~~ said stored plurality of non-head fragments after the session has been generated.

20.   (Currently Amended) A system, comprising:

an entry point to receive packet fragments;

a network device coupled to the entry point to determine if a packet fragment received at the entry point is a head fragment or a non-head fragment,

wherein if the received packet fragment is a~said non-head fragment:

the network device can~is adapted to determine if a session associated with a~said head fragment, corresponding to the received non-head fragment, is present, update the received non-head fragment with routing information from the helper session, and forward the updated non-head fragment based on the routing information;

a storage unit coupled to the network device to~otherwise store the received non-head fragment if the helper session is not present, and wherein the network device can~is adapted to wait for the corresponding head fragment to be received at the entry point;

wherein if the received packet is the head fragment, the network device can~is adapted to forward the head fragment to be processed by at least one feature to determine said routing information, including a destination address for said head fragment; and

an exit point coupled to the network device, wherein any corresponding non-head fragment stored at the storage unit can be updated at the exit point with said routing information that is determined as a result from processing of the head fragment, and further wherein the updated corresponding non-head fragment and head fragment can be forwarded from the exit point,

wherein said update of the received non-head fragment with routing information and said update of any stored corresponding non-head fragment with said routing information include:

application of said determined routing information that includes said destination address to said received non-head fragment and to said any stored corresponding non-head fragment.

21.   (Original) The system of claim 20 wherein the network device comprises a switch.

22.   (Original)   The system of claim 20 wherein the entry and exit points comprise part of at least one software-based function.

23. (Original) The system of claim 20 wherein the feature to process the head fragment comprises at least one from a plurality of Layer 4 through Layer 7 features.

24. (Original) The system of claim 20 wherein the feature to process the head fragment is integrated in the network device.

25. (Original) The system of claim 20, further comprising at least another network device coupled to the exit point and having the feature to process the head fragment.

26. (Original) The system of claim 20, further comprising another storage unit, coupled to the exit point, to store the routing information from the helper session.

27. (Original) The system of claim 20, further comprising a software program to operate in conjunction with the network device to handle the non-head and head fragments.

28. (New) An apparatus to handle packet fragments, the apparatus comprising:
a network device adapted to determine if a received fragment is either a head fragment or a non-head fragment, to process the received fragment if it is a head fragment to determine routing information that includes a destination address for said head fragment, and to apply the determined routing information that includes said destination address to any corresponding non-head fragment that is received subsequently after the head fragment and to any corresponding stored non-head fragment that is received prior to the head fragment.

29. (New) The apparatus of claim 28 wherein said network device includes a switch.

30.   (New) The apparatus of claim 28 wherein said network device is adapted to perform said application of said routing information by addition of a routing tag to non-head fragments associated with said processed head fragment.

31.   (New) The apparatus of claim 28 wherein said network device is adapted to process said head fragment according to at least one of Layer 4 through Layer 7 criteria.